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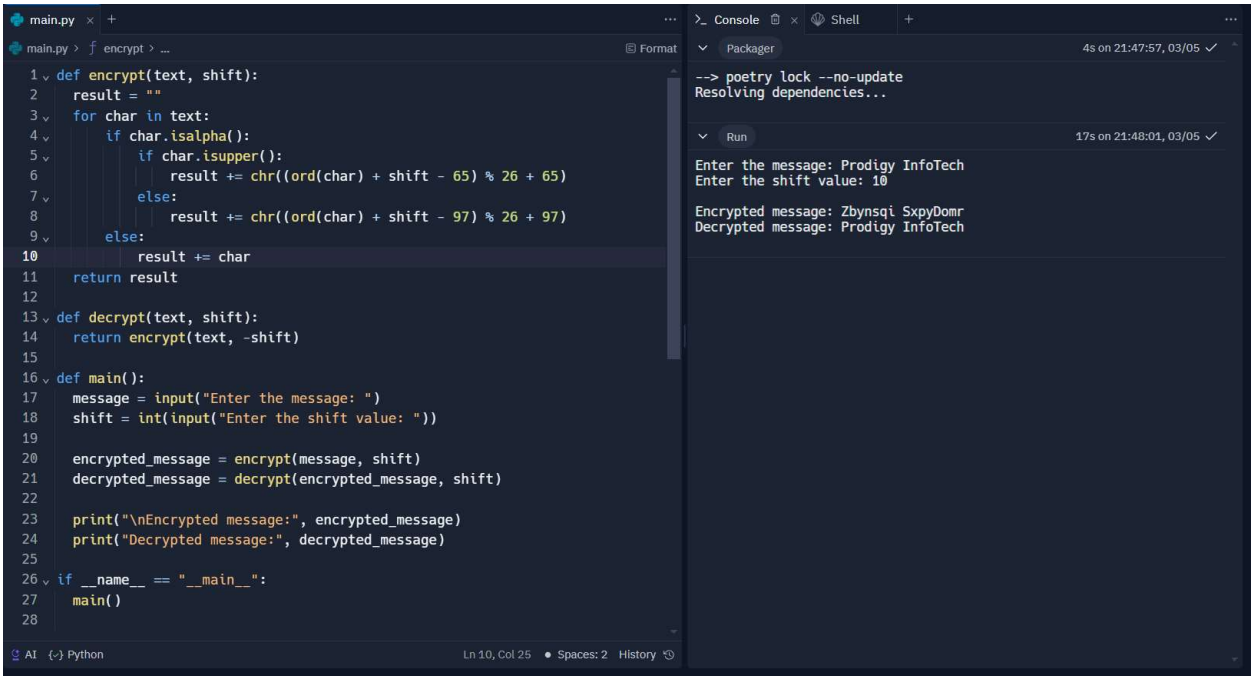
TASK: IMPLEMENT CAESER CIPHER

Overview of the Task: The assigned task focused on implementing the Caesar Cipher algorithm using Python for text encryption and decryption. The objective was to create a program that allows users to input a message and a shift value, enabling the encryption and decryption of the entered text.

Approach: I approached the task by first researching the Caesar Cipher algorithm to understand its principles and how it operates. Subsequently, I designed a Python program that incorporated functions for both encryption and decryption. The program takes user input for the message and shift value, providing output for the encrypted and decrypted messages.

Implementation: The Python program includes two main functions, `encrypt` and `decrypt`, which handle the core logic of the Caesar Cipher. The `main` function serves as the user interface, collecting input and displaying the results. The program ensures the proper handling of both uppercase and lowercase letters while ignoring non-alphabetic characters.



Testing: To ensure the accuracy and functionality of the program, I conducted rigorous testing with various input scenarios. The program consistently produced correct results, encrypting and decrypting messages as expected. Error handling mechanisms were implemented to address potential issues during user input.

Learnings: This task provided valuable insights into cryptographic algorithms, specifically the Caesar Cipher. I gained hands-on experience in Python programming, emphasizing user interaction and algorithmic implementation. Additionally, I enhanced my problem-solving skills by addressing challenges related to character handling and mathematical operations.

Conclusion: In conclusion, the completion of the cybersecurity internship task was a fulfilling experience that allowed me to apply theoretical knowledge to practical coding. I am grateful for the opportunity to contribute to Prodigy InfoTech's internship program and look forward to further refining my skills in the cybersecurity domain.

Thank you for providing me with this enriching internship experience. I appreciate the guidance and support throughout the task.